ABSTRACT OF THE DISCLOSURE

A method of improving an image or a set of images, by transforming an intensity histogram thereof is disclosed. The method comprises: (a) fitting the intensity histogram to a sum of a plurality of localized functions; (b) using the plurality of localized functions to define a plurality of localized intensity histograms; (c) for each localized intensity histogram, performing at least one image enhancement procedure, thereby providing a plurality of improved localized intensity histograms; and (d) combining the plurality of improved localized intensity histograms, thereby transforming the intensity histogram of the image. In various exemplary embodiments, the method further comprises detecting clutter and/or an outline of at least one region in the image or set of images.